

## MACLEOD TRAIL CORRIDOR STUDY

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### EXECUTIVE SUMMARY

This report outlines the recommendations of the corridor studies completed by Transportation Planning with assistance from AECOM (North Section) and HDR (South Section) and identifies right-of-way acquisition requirements for the North Section. A summary of the Urban Boulevard character and the recommendations is included graphically in Attachment 1. A summary of the public engagement program undertaken as part of this study is included.

The Macleod Trail Corridor Study was undertaken to develop an Urban Boulevard corridor plan for Macleod Trail that aligns with The City's CTP/MDP, where Macleod Trail functions as a primary cycling, primary transit and high occupancy vehicle (HOV) route, integrates high-density, mixed use urban development, includes high-quality urban design and green infrastructure and accommodates reasonably high volumes of vehicle traffic.

Due to the length of the corridor, the study area was separated into two sections; the North (25 Avenue to 67 Avenue) and South (67 Avenue to Anderson Road). The recommendations include maintaining six lanes of vehicular traffic, enhancing the public realm via boulevards, widened sidewalks and pathways, and adding separated cycle tracks.

### ADMINISTRATION RECOMMENDATION(S)

1. Adopt the recommendations of the Macleod Trail Corridor Study, North and South Sections (included in Attachments 2 and 3).
2. Endorse a phased implementation, on an opportunity basis, of the Urban Boulevard elements in the Macleod Trail Corridor Study South Section.
3. Endorse the long term Right-of-Way Requirements (included in Attachment 4) and the land acquisition and corridor redevelopment objectives of the Macleod Trail Corridor Study North Section.
4. Direct Administration to develop a land acquisition and protection strategy that will enable the vision to be realized in the future, including amendment of the Land Use Bylaw to accommodate the required bylaw setback, and report back to the Standing Policy Committee on Transportation and Transit.

### PREVIOUS COUNCIL DIRECTION / POLICY

At the 2007 December 03 Combined Meeting of Council, Administration received Notice of Motion NM2007-40 which directed Administration to prepare a report to the Standing Policy Committee on Land Use, Planning and Transportation outlining costs, timing of a corridor (functional) study for the Macleod Trail Corridor from Anderson Road to 25 Avenue S.E.

At the 2008 December 08 Meeting of Council, Council received LPT2008-78 Report "Macleod Trail Corridor" and approved Administration's recommendation to initiate Transportation Planning Studies for Macleod Trail from 25 Avenue to the city limits subsequent to approval of the Calgary Transportation Plan (estimated Q4 2009 start).

### BACKGROUND

The Calgary Transportation Plan, approved by Council in 2009, envisions Macleod Trail from 25 Avenue S.E. to Anderson Road redeveloping from a major street into an Urban Boulevard. The primary function of an Urban Boulevard is to accommodate all modes of transportation in a high

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density, moderate speed urban environment. It will focus on the pedestrian realm, while still accommodating through traffic. Macleod Trail is also identified as a Primary Cycling Route, Primary Transit Route and a candidate high occupancy vehicle (HOV) route. The CTP envisions Macleod Trail south of Anderson Road as a skeletal road (expressway).

The Macleod Trail Corridor Study was initiated to examine how Macleod Trail could be transformed into an Urban Boulevard in keeping with CTP's vision, and to re-examine the previously planned transportation improvements within the context of the Urban Boulevard character.

Transportation has examined the Macleod Trail corridor on many occasions. Previous studies have allowed Transportation to protect right-of-way for significant transportation improvements along Macleod Trail at 25 Avenue S.E., 50 Avenue S.E., Glenmore Trail, Heritage Drive, Southland Drive and Anderson Road. While some of these improvements have been built, such as the Glenmore Trail and Anderson Road interchanges, the cost for the improvements that are still planned (interchanges at 25 Avenue, 50 Avenue, Heritage Drive and Southland Drive) are approximately \$375M. None of the planned improvements are within the current Investing in Mobility 10 year capital plan.

### **INVESTIGATION: ALTERNATIVES AND ANALYSIS**

The intention of the Macleod Trail Corridor Study was to examine how Macleod Trail could be transformed into an Urban Boulevard in keeping with CTP's vision and identify what would be required in order to achieve such a transformation. Looking 30 years into the future presents a much different picture than the Macleod Trail of today, with the MDP's vision of redevelopment occurring to support mixed-use, higher density land uses and Activity Centres at strategic nodes along the corridor; the recommended corridor plans support this future Macleod Trail.

While options were examined that increased the vehicular capacity of the roadway (i.e. 8 lanes versus the current 6), or decreased the current vehicular capacity in an effort to reduce property impacts (i.e. 4 lanes versus the current 6), a balance was sought which allowed for an enhanced public realm, including walking and cycling facilities, while minimizing property impacts and maintaining the 'character' of an Urban Boulevard as envisioned in the CTP. The Urban Boulevard character is a fluid notion which must be applied in a context-sensitive manner. Within the Macleod Trail context, the project team determined that the Urban Boulevard character must enhance the desirability of the corridor for walking and cycling as well as support the interaction of the transportation elements of the corridor with the anticipated adjacent land uses (retail, commercial, et cetera) and the communities. This precluded wide expanses of unbroken pavement which result in an inhospitable pedestrian crossing environment and discourages permeability across the corridor.

Due to the varying environment and context along the length of the corridor, the study examined three distinct North Section segments and three distinct South Section segments. The recommendations for each are outlined below as follows:

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North – Cemetery Hill (25 Avenue to 34 Avenue S): Constrained right-of-way with no ability to acquire additional land results in a recommendation to maintain the existing cross-section through this segment, with aesthetic improvements being made to the roadway-cemetery boundary walls to provide a better transition into the Urban Boulevard to the south. The planned interchange at Macleod Trail and 25 Avenue is recommended to be maintained due to the interaction of the LRT tracks with the adjacent intersection. At 34 Avenue S a new signalized all-turns intersection is proposed with the existing connection between Spiller Road and Macleod Trail/34 Avenue being closed. Cyclists and pedestrians are to be accommodated on Spiller Road between 34 Avenue and the Elbow River pathway. (See Figure ES.4 in Attachment 2).

North – Central (34 Avenue to 58 Avenue S): The Urban Boulevard cross-section for this segment would comprise three travel lanes in each direction with a raised median able to accommodate single left turn lanes and plantings. A wide sidewalk as well as a uni-directional cycle track would be provided on each side of Macleod Trail and separated from the traffic lanes by a green boulevard. This cross-section requires approximately 12 m of additional right-of-way along the length of Macleod Trail within this 2.6 km long segment. The widening is proposed to take place predominantly on the east side between 34 Avenue and 50 Avenue and predominantly on the west side between 50 Avenue and 58 Avenue, due primarily to the availability of City-owned parcels and the redevelopment opportunities that would be available.

The removal of the planned interchange at Macleod Trail and 50 Avenue S from the long range plans is recommended as the interchange does not support the Urban Boulevard character. It is proposed that 4 Street W at 56 Avenue S be closed due to the sharp angle at which 4 Street intersects Macleod Trail. (See Figures ES.5, ES.6, and ES.7 in Attachment 2).

North – Chinook (58 Avenue to 67 Avenue S): Sufficient right-of-way exists within this segment to maintain the existing 8-lane cross-section with single left turns and to provide separated two-way bikeways and wide sidewalks as well as green boulevard space on both sides of Macleod Trail. Two new pedestrian/cyclist bridges are proposed to improve crossing conditions over Glenmore Trail. The recommendations in this segment align with the Chinook Station TOD Plan and the 61 Avenue concept plan. (See Figure ES.8 in Attachment 2).

South – Corridor (67 Avenue to 109 Avenue S): Sufficient right-of-way exists within this segment to maintain six (narrowed) lanes of traffic and incorporate wide continuous sidewalks and separated two-way continuous bike paths on both sides of Macleod Trail with boulevard and median green space. The planned interchange at Macleod Trail and Heritage Drive is recommended to be maintained due to the interaction of the LRT tracks with the adjacent intersection. The removal of the planned interchange at Macleod Trail and Southland Drive from the long range plans is recommended as the interchange does not support the Urban Boulevard character. (See Figures ES-5, ES-6, and ES-8 to ES-13 of Attachment 3).

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South – CP Overpass (75 Avenue to Heritage Drive): The long term plan for this segment includes a widening of the existing overpass structure as well as the construction of a separate structure intended to accommodate pedestrian and cycling facilities to ensure a continuous network along the length of Macleod Trail. Interim plans for this segment include the reallocation of the existing bridge deck width to include a multi-use pathway on both sides of the overpass via the narrowing of the traffic lanes and the median. (See Figure ES-7 of Attachment 3).

South – Anderson Station Area (109 Avenue to Anderson Road): This segment acts as a transition point between the Urban Boulevard and the expressway section of Macleod Trail south of Anderson Road. As such, it is recommended that the 8-lane cross-section be maintained and that sidewalks on both sides of Macleod Trail be designed to transition into existing and future development at the Anderson Station area and Southcentre area. (See Figure ES-14 of Attachment 3).

### Additional Recommendations:

- Reduce the speed limit along Macleod Trail from 60 km/h to 50 km/h between 109 Avenue and 25 Avenue S.
- All traffic lanes are 3.3 m with the exception of curb lanes which are 3.5 m to accommodate transit vehicles.
- Examine the potential for including a multi-use pathway along the LRT maintenance right-of-way between 61 Avenue and 39 Avenue S to connect Glenmore Trail and the Elbow River pathway. (See Figure ES.9 of Attachment 2).

The reduced speed and lane widths align with the Complete Streets Guide principles of road right-of-way variance. Streets within Activity Centres/Corridors should consider narrow travel lane widths and promote slower automobile speeds, not increased automobile capacity. In the future a slower automobile speed is beneficial to providing a safer environment for pedestrians and cyclists travelling both along and across Macleod Trail.

Property is required to allow for the Urban Boulevard widening of the North Section between 34 Avenue and 58 Avenue S as shown in Figures G.1 through G.3 of Attachment 4. The total area of land required from private (non-City) landowners is approximately 1.9 hectares (4.8 acres) along the 2.6 km length of the North – Central segment. This constitutes a strip of approximately 12 m along the length and assumes that only the land required for the widening would require acquisition. There may be instances where this purchase would render a parcel undevelopable and the entire parcel would require purchase. A land acquisition/parcel reconsolidation strategy is recommended to be developed in order to better assess these risks.

### **Stakeholder Engagement, Research and Communication**

An online survey was conducted at the beginning of the project (April 23 to May 4, 2012) which asked respondents to identify their top mobility concerns and the changes they would like to see on Macleod Trail in the future. Over 3,000 responses to this survey were received. The most common concern was traffic delays and the most commonly desired improvement was more trees and landscaping. For future alternative mode choice, there was a fairly even split between transit, cycling and walking.

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The City hosted two initial open houses on June 14 and 19, 2012, at Chinook Mall and Southcentre Mall, respectively, to provide information on the study purpose, Urban Boulevards, responses from the online survey and to present design features under consideration and preliminary cross-section alternatives for the corridor. Attendance at the Chinook Mall and Southcentre Mall events were estimated at about 200 and 140 persons, respectively. Of the 68 feedback forms received, the most common comments included support for the increased public realm and concerns over future traffic accommodation.

A stakeholder meeting was held for property and business owners along the corridor on October 23, 2012, at the Carriage House Inn. Over 550 invitations to the meeting were directly mailed to business and property owners along Macleod Trail. The intention of this event was to be able to address specific concerns of business/property owners related to the impacts of the Urban Boulevard concept; in particular, the purpose was to be able to address questions related to right-of-way requirements and potential impacts to business accesses with this specific group of stakeholders. Attendance at this event was minimal, with fewer than 10 attendees. No concerns were raised in the comments received.

The City hosted a final open house on October 25, 2012, at Chinook Mall to report back on what was heard from the online survey and the June open houses and to present the recommended corridor plans for Macleod Trail. The specific number of attendees was not captured, but 28 feedback forms were received. Most respondents understood how public input was considered and, where possible, incorporated into the proposed plans. Over 75% of respondents supported the vision of Macleod Trail developing over time into an Urban Boulevard in the future.

### **Strategic Alignment**

This study aligns with multiple policies in the CTP, MDP and the 2020 Sustainability Direction including:

- Transportation Goal #4: Enable public transit, walking and cycling as the preferred mobility choices for more people.
- MDP Policy 2.2 to shape a more compact urban form by facilitating the development and intensification of the inner city corridor of Macleod Trail through enhanced mobility options.
- Sustainability Principle for Land Use and Mobility #2: create walkable environments.
- Sustainability Principle for Land Use and Mobility #4: provide a variety of transportation options.
- Sustainability Principle for Land Use and Mobility #9: connect people, goods and services locally, regionally and globally.
- Key Direction for Land Use and Mobility #5: increase mobility choices.
- Key Direction for Land Use and Mobility #7: create Complete Streets.

### **Social, Environmental, Economic (External)**

This report has been reviewed for alignment with The City of Calgary's Triple Bottom Line (TBL) Policy Framework. The following implications were identified:

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Social: Improvements to the corridor promote active living by providing infrastructure for pedestrians and cyclists. The proposed improvements have been developed to support transit and recommended land uses.

Environmental: Provisions for separate bike paths and wide sidewalks along the corridor encourage alternate modes of transportation by providing a higher level of safety and comfort for cyclists and pedestrians. Green boulevard space has been incorporated along the corridor.

Economic (External): The proposed improvements have been developed to support higher-density, mixed use redevelopment of the Macleod Trail corridor as well as to move workers and goods efficiently via the provision of increased mobility choices.

### Financial Capacity

#### Current and Future Operating Budget:

At build out, operating costs will be higher than today given the additional infrastructure added to the network. Specific incremental operating costs have not been quantified. It is anticipated that the additional operating costs can be accommodated within existing budgets.

#### Current and Future Capital Budget:

A Class 4 cost estimate prepared as part of the corridor study estimates the construction cost for the North Section to be \$47.2M and for the South Section to be \$51.8M, for a total corridor construction cost estimate of \$99.0M. This figure includes removal, new construction (i.e., walkways, cycle paths and green spaces, etc.), illumination, signs and pavement markings, and new and relocated traffic signals. This figure excludes utility relocations and storm/sanitary costs as well as land acquisition costs.

Opportunity based land acquisition costs for the right-of-way required for the North Section are estimated to be \$20.6M. This figure assumes the purchase of required right-of-way occurs on an opportunity basis as redevelopment occurs and makes use of the bylaw setback mechanism. It is anticipated that this strategy could result in the acquisition of the required right-of-way taking a significant length of time to achieve for the entire 2.6 km length of the North (Central) segment. The cost of expediting the acquisition of the required right-of-way through outright as-is purchase could be exponentially higher, with estimates as high as \$100M.

### Risk Assessment

The corridor plans are necessary in order to achieve the Urban Boulevard vision of the CTP for Macleod Trail. Without the additional right-of-way recommended in the North Section, there is a risk that Macleod Trail will not transform into an Urban Boulevard and will remain the street that it is today.

#### REASON(S) FOR RECOMMENDATION(S):

The recommended plans align with CTP's vision of the transformation of Macleod Trail into an Urban Boulevard and support the desired long-term redevelopment of the corridor.

### ATTACHMENT(S)

1. Summary maps for North and South Macleod Trail Corridor Study Sections

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2. Macleod Trail Corridor Study North Segment Executive Summary
3. Macleod Trail Corridor Study South Segment Executive Summary
4. Right-of-Way Requirements